

**Notice of Allowability**

Application No.

09/939,106

Examiner

Insun Kang

Applicant(s)

SOKOLOV, STEPAN

Art Unit

2193

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed 8/15/2005.
2. ☒ The allowed claim(s) is/are 35-53(renumbered as 1-19).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 8/15/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ramin Mahboubian (Reg. 44,890) on 9/27/2005.

The application has been amended as follows:

**Per claim 35 (renumbered as 1):**

Line 12: "substantially" has been deleted.

Line 13: after "virtual machine instructions," --and at least one operation that cannot be performed by said defined first set of virtual machine instructions-- has been added.

Line 20: after "bytecodes," --in said defined first set of virtual machine instructions--has been added.

**Per claim 42 (renumbered as 8):**

Line 12: "substantially" has been deleted.

Line 13: after "virtual machine instructions," --and at least one operation that cannot be performed by said defined first set of virtual machine instructions-- has been added.

Line 20: after “bytecodes,” –in said defined first set of virtual machine instructions—has been added.

**Per claim 48 (renumbered as 14):**

Line 1: “including” has been changed to –embodying--.

Line 12: “substantially” has been deleted.

Line 13: after “virtual machine instructions,” –and at least one operation that cannot be performed by said defined first set of virtual machine instructions-- has been added.

Line 21: after “bytecodes,” –in said defined first set of virtual machine instructions—has been added.

These amendments were necessary in order to further clarify the claims.

***Examiner’s statement of Reasons(s) for Allowance***

2. Claims 35-53 (renumbered 1-19) are allowed.

The following is an examiner’s statement of reasons for allowance:

While the prior arts of record, i.e. Clausen, O’Connor do disclose a method of reducing the number of instructions to be dispatched by using a macro instruction and a folding strategy, Clausen and O’Connor, taken alone or in combination, ultimately fail to teach or fairly suggest at least: translating two or more different virtual machine instructions into a reduced instruction from the reduced set of virtual machine instructions where the reduced set of virtual machine instructions provides all of the

functionality provided by the defined set of virtual machine instruction and at least one operation that cannot be performed by the defined first set of virtual machine instructions, thereafter determining whether the sequence of bytecodes includes a Getfield instruction immediately followed by an Astore instruction wherein these instructions are selected from the reduced set of virtual machine instructions, and finally executing the macro instruction that represents the Getfield immediately followed by the Astore instruction to store a value into a local variable.

The generation of a macro instruction to represent the sequence of instructions in the reduced set of instructions will significantly improve the overhead associated with dispatching bytecodes in virtual machines, especially those operating with limited resources.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-F 7:30-4 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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